FINDING OF NO SIGNIFICANT IMPACT (FONSI)
and
FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)
for the
Construction of a South Gate and Access Road

Introduction

Eielson Air Force Base (Eielson) is proposing to construct a new secure gate, access road, and vehicle inspection facility that will provide a second controlled entry point to the base that does not violate the runway clear zone. At the present time hazardous materials, large commercial trucks, and Air Force and Army munitions shipments must go through the new Hursey gate or a substandard south gate that is located within the runway clear zone.

Description of the Proposed Action

A new entry point onto Eielson will be constructed at mile 337 of the Richardson Highway near the southern end of Eielson's flightline. In addition to a gate and a vehicle inspection facility, 3,750 feet of road will be constructed that will connect the Richardson Highway with Mullins Pit Road. The road will require a culverted crossing of Garrison Slough. Construction of the road will result in the placement of approximately 31,858 cubic yards of material, including gravel, chunk asphalt, crushed asphalt, bull rock, and concrete into 4.5 acres of low value black spruce scrub/shrub wetlands. This location for the facility would be entirely outside of the runway clear zone and in compliance with Air Force runway safety standards.

Alternatives to the Proposed Action

Two alternatives to the proposed action were identified. Alternative 1 would modify the existing south gate and access road so that it would meet current security standards and also provide facilities for vehicle inspection. This location for a gate is in the clear zone of the runway and restrictions to vehicle movements would be required if this alternative was implemented. In addition, the location would potentially interfere with operation of the runway instrument landing system, creating a significant aircraft safety concern. Alternative 2 would modify the old Hursey Gate that was closed when the new Hursey Gate was built. The old gate would be reconfigured and a vehicle inspection facility would be added. This location would also be in the runway clear zone, creating aircraft safety problems. In addition, it would require that hazardous materials and wastes be transported through the highest populated portions of the base.

No Action Alternative

Under the no action scenario the existing south gate would continue to be used by a limited amount of traffic. Aircraft safety issues would remain and its use would be significantly restricted.

Report Documentation Page

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Environmental Impacts of the Proposed Action

Wetlands and Floodplains

The proposed project would result in the loss of 4.5 acres of black spruce scrub/shrub wetlands. The wetlands are relatively low-value and typically used by wildlife on a limited basis. Also, a portion of the project area lies within the 100-year floodplain of Garrison Slough. The proposed action would require a road crossing of this slough at a point where the stream is quite narrow and has relatively little flow, even during spring breakup or summer rainstorm events. The slough crossing would be adequately culverted so that it could handle peak instream flows without altering floodwater retention characteristics of the watershed.

Biological Resources

Impacts to biological resources from the proposed action would be minimal. Habitat impacted is a wetland type that occurs frequently in the vicinity of Eielson. Wildlife that typically uses this type of habitat would likely be displaced to adjoining like habitat.

Threatened or Endangered Species

There are no threatened or endangered species in the project area. The project area is not suitable habitat for any of the threatened or endangered species occurring in the Alaskan interior.

Historical or Cultural Resources

Most archeological sites on Eielson lands have been identified and mapped. The proposed project is not associated with any known sites. In the event that historic or cultural sites are discovered during project construction, activities will be halted and a professional archeologist will evaluate the find.

Safety

Construction of a south gate and access road in the proposed location will eliminate safety concerns that currently exist with the operation of existing base entry points. Constructing the gate and road outside of the runway clear zone will comply with Air Force safety requirements and minimize risks to aircraft operations.

Noise

Implementation of the proposed action could result in short-term, minor impacts from noise from construction related machinery operation.

Air Quality

The proposed action will have minor air quality impacts during construction due to fugitive dust and machinery exhaust. Such impacts will be highly localized and temporary in nature.

Mitigation

Agency coordination for this project did not result in any requirement for specific mitigation other than standard best management practices that were already incorporated into the project design. The Corps of Engineers 404 wetlands permit also did not contain any specific mitigation requirements.

Public Comment

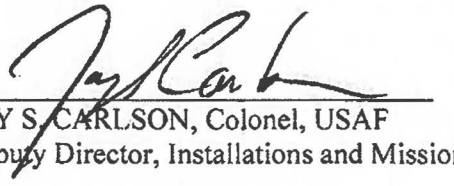
No public comments were received from the public noticing of the Environmental Assessment/FONSI/FONPA in the local Fairbanks newspaper.

Findings

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) implementing regulations for NEPA (40 CFR Part 1500-1508), and Air Force Instruction 32-7061, *Environmental Impact Analysis Process* (32 CFR Part 989), the Air Force has conducted an Environmental Assessment (EA) for the construction of a new south gate and access road. This FONSI/FONPA has been developed pursuant to information provided in the accompanying EA.

Finding of No Practicable Alternative: Eielson is an Air Force facility that operates, maintains, and trains combat forces in close air support of military operations worldwide. As part of its daily operations, Eielson must be able to inspect and process large numbers of vehicles in a safe and secure manner. Building a new south gate and access road that does not violate the runway clear zone will greatly facilitate this process. Taking all the environmental, economic, and other pertinent factors into account, pursuant to Executive Order 11990, the authority delegated by SAFO 791.1, and taking into consideration the submitted information, I find that there is no practicable alternative to this action and the proposed action includes all practical measures to minimize harm to the environment.

Finding of No Significant Impact: Based on this environmental assessment, which was conducted in accordance with the requirements of NEPA, CEQ, and Air Force Instructions, I conclude the construction of a new south gate and access road will not result in significant impacts to the environment. I also find that the preparation of an environmental impact statement is not warranted.



23 Jul 07

JAY S. CARLSON, Colonel, USAF
Deputy Director, Installations and Mission Support

Date

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

JUN 12 2007

MEMORANDUM FOR HQ PACAF/A7NA
ATTN: JULIE HONG
25 E Street, Suite D-306
Hickam AFB HI 96853-5412

FROM: 354 FW/CV
354 Broadway Street, Unit 19A
Eielson AFB AK 99702-1899

SUBJECT: Finding Of No Significant Impact (FONSI)/Finding Of No Practicable Alternative (FONPA)/Environmental Assessment (EA) for the Construction of a South Gate and Access Road

1. Attached you will find the FONSI/FONPA/EA for Eielson AFB's proposal to construct a new south gate and access road. The gate and road will provide a facility for processing large commercial vehicles. The project will result in impacts to 4.5 acres of low-value black spruce scrub/shrub wetlands.

2. Please review and coordinate with the required groups. If there are any questions, please contact Mr. Jim Nolke, 354 CES/CEVP, at 317-377-3365.

BRIAN D. MAAS
Colonel, USAF
Chairman, Environmental Protection Committee

Attachment:
FONSI/FONPA/EA

Environmental Assessment

for the

Construction of a South Gate and Access Road

Eielson Air Force Base, Alaska

354th Fighter Wing
February 2007

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Air Quality

The proposed action will have minor air quality impacts during construction due to fugitive dust and machinery exhaust. Such impacts will be highly localized and temporary in nature.

Mitigation

No special conditions (mitigation) other than standard best management practices that are already incorporated into the project design are required by any federal or state agency for impacts that may result from this project.

Public Comment

No public comments were received from the public noticing of the Environmental Assessment/FONSI/FONPA in the local Fairbanks newspaper.

Findings

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) implementing regulations for NEPA (40 CFR Part 1500-1508), and Air Force Instruction 32-7061, *Environmental Impact Analysis Process* (32 CFR Part 989), the Air Force has conducted an Environmental Assessment (EA) for the construction of a new south gate and access road. This FONSI/FONPA has been developed pursuant to information provided in the accompanying EA.

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Finding of No Significant Impact: Based on this environmental assessment, which was conducted in accordance with the requirements of NEPA, CEQ, and Air Force Instructions, I conclude the construction of a new south gate and access road will not result in significant impacts to the environment. I also find that the preparation of an environmental impact statement is not warranted.

_____ _____

WILLIAM M. CORSON, Colonel, USAF Date
Director, Installations and Mission Support

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TABLE OF CONTENTS

List of Figures and Tables

Environmental Assessment (EA) for the Construction of a South Gate and Access Road

1.0 Purpose and Need for Action

Section 1 provides a description of the purpose and need for the proposed action.

1.1 Background and Objectives for the Proposed Action

1.1.1 Eielson Air Force Base (Eielson) is proposing to construct a new secure access road, gate, and vehicle inspection facility that will provide oversize commercial traffic a point of entry to the base. Currently, large commercial vehicles must enter through the main gate which is designed mainly for small trucks and passenger vehicles.

1.1.2 Eielson was established in 1944 and is currently part of the Pacific Air Forces' (PACAF) Command. The 354th Fighter Wing (FW) operates, maintains, and trains combat forces in close air support and interdiction missions in support of war plans in three operational theaters. The 354 FW's mission is to train and equip personnel for close air support of ground troops in an arctic environment. The 168th Air Refueling Wing is the primary tanker unit of the Pacific Rim, annually transferring over 17 million pounds of fuel in flight to predominantly active duty aircraft.

1.1.3 Eielson is typical of most Air Force bases in that a significant amount of vehicle traffic enters and leaves the base on a daily basis. This traffic includes a large permanent civilian work force, temporary contractor employees, and military dependents that work off base. It also includes commercial traffic that is comprised of large vehicles with cargoes that must be inspected. Eielson's main gate is located at the north end of the base and is not conveniently configured for the inspection and processing of large commercial vehicles and dangerous cargo such as munitions and other hazardous materials. Bringing these types of materials in through the main gate requires transit through higher density population areas, creating unacceptable risks due to the possibility of transport vehicle accidents or accidental releases of hazardous material.

1.1.4 Prior to construction of the new gate, the main entry point onto Eielson was the old Hursey Gate. The main impetus to replace the old gate was the fact that it was in the flightline clear zone and violated Air Force runway safety standards. When the gate was originally built it was outside of the clear zone. However, in the mid-1980's due the Air Force increased the size of the runway clear zone from 1000-feet by 2000-feet to 3000-feet by 3000-feet, causing the old Hursey gate to be in the clear zone and requiring it to have a waiver. A condition of this waiver was that Eielson would eventually relocate the gate out of the clear zone. For this reason the new Hursey Gate was built.

1.1.5 In addition to the new Hursey Gate, Eielson has an entry point at the south end of the flightline that enters directly from the Richardson Highway. This gate is used for large shipments of material such as munitions by the Air Force and by Army personnel accessing their

range facilities that lie in the Yukon Training Area immediately behind Eielson land. This allows movement of hazardous materials and equipment onto and through the base without passing through the more densely populated areas. A major difficulty with using this gate, however, is that its access road crosses the clear zone of Eielson's runway and during any aircraft take off or landing, vehicles must wait until the aircraft has cleared the area. The gate also does not have a dedicated inspection facility and staging area which makes vehicle inspection cumbersome and its configuration and design does not meet force protection standards for a secure base.

1.1.6 There are several stated needs for the construction of a new south gate and road including relieving congestion, reducing safety risks associated with hauling hazardous materials through populated base areas, and meeting force protection standards for entry/exit points. However, an even more critical design criterion is the need to have a gate that is outside of the runway clear zone. The proposed project meets this criterion.

1.2 Location of the Proposed Action

1.2.1 Eielson is located within the Fairbanks North Star Borough, approximately 120 miles south of the Arctic Circle and 23 miles southeast of Fairbanks. Other communities near Eielson include North Pole and Moose Creek to the north and Salcha to the south. Moose Creek and Salcha are communities that exhibit low density populations and are primarily residential areas (Figure 1-1).

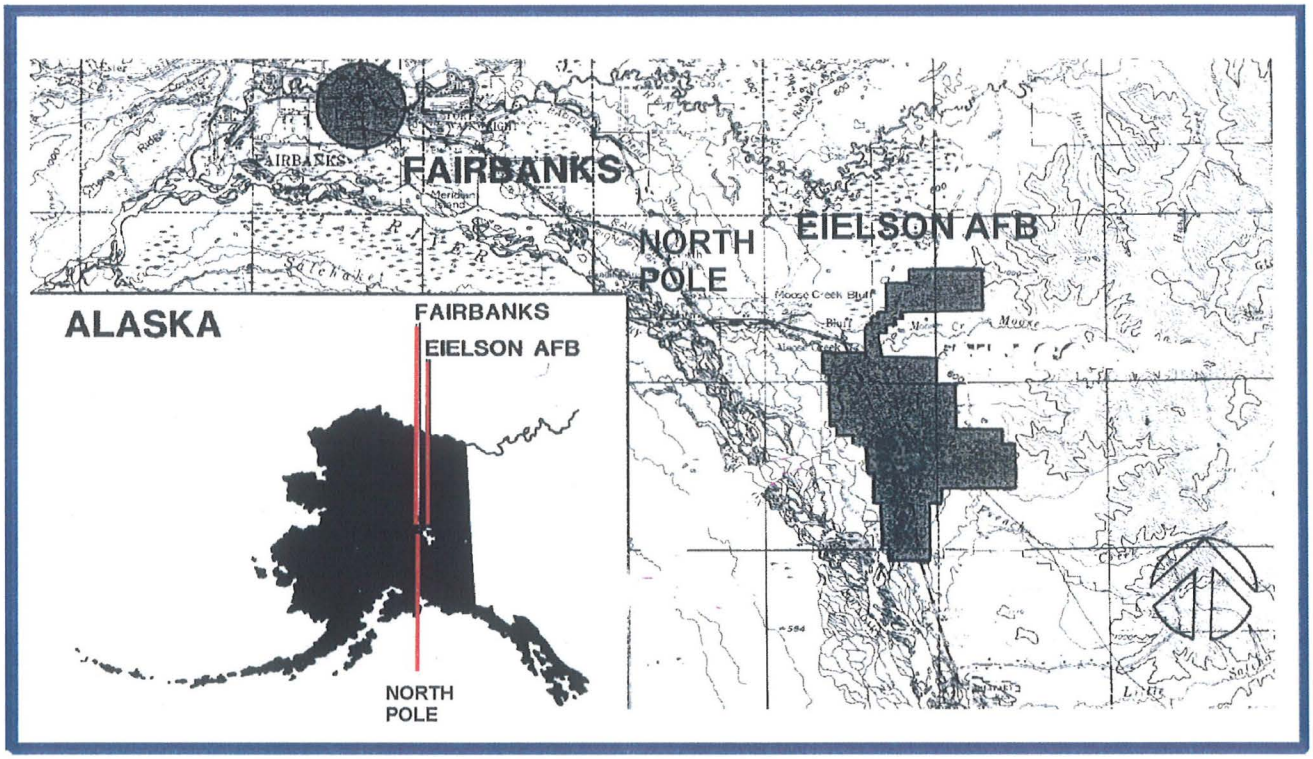


Figure 1-1 – Location Map

1.2.2 Base lands include 19,790 contiguous acres bounded on the west by the Richardson Highway and on the north and east by Army lands (Yukon Training Area). To the south, the community of Salcha borders Eielson. The developed portion of Eielson is primarily an area filled by gravel to elevate potential building sites above the 100-year floodplain of nearby watersheds. In addition, more than 90 percent of the lands that constitute Eielson were at one time wetlands. Of the remaining undeveloped portions of the base, 70 percent are wetlands. As a consequence, planning and utilization of Eielson lands becomes very difficult if one is to entirely avoid siting facilities in wetlands and floodplains.

1.2.3 The area of the base within which the proposed project would be constructed is in an open, treeless area that is immediately adjacent to and west of the flightline. The Richardson Highway runs parallel to the flightline along its western boundary and is a major transportation corridor in interior Alaska. The proposed gate and access road would provide a controlled direct connection between base lands and the Richardson Highway for large commercial vehicles.

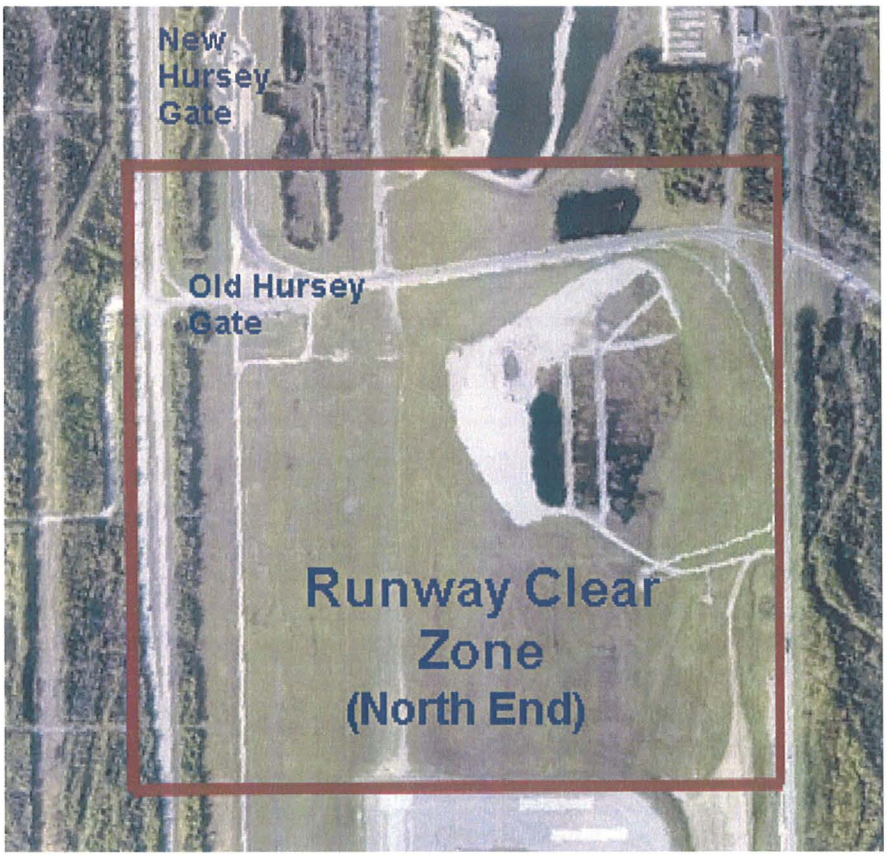


Figure 1-2 – Flightline Clear Zone at North End of Runway

1.2.4 A primary issue that significantly affects the location and operation of a gate and road that is located in the vicinity of the flightline is its proximity to the runway clear zone. The clear zone is an area that must be kept free of obstructions for safety reasons while aircraft are taking off or landing. Air Force Instruction 32-1056 provides guidance for what facilities and structures can be sited in a runway clear zone. This instruction prohibits siting of structures such as gates and related buildings within the clear zone. Eielson had previously received a waiver to this requirement for the operation of the old Hursey Gate because its location predated the expanding

of the size of the clear zone that ultimately placed it within the clear zone. Requests for permanent waivers cannot be obtained unless the base can "clearly show no other feasible alternatives exist" (Section *2.2 New Waivers).* Figure 1-2 and 1-3 shows the relationship of the flightline and the clear zone at each end of the runway. Last year a new gate was built outside of the clear zone to comply with the clear zone restriction. The south gate, in its current configuration is still in violation of the clear zone restrictions. To rectify this, Eielson is proposing to construct a new south gate outside of the clear zone.

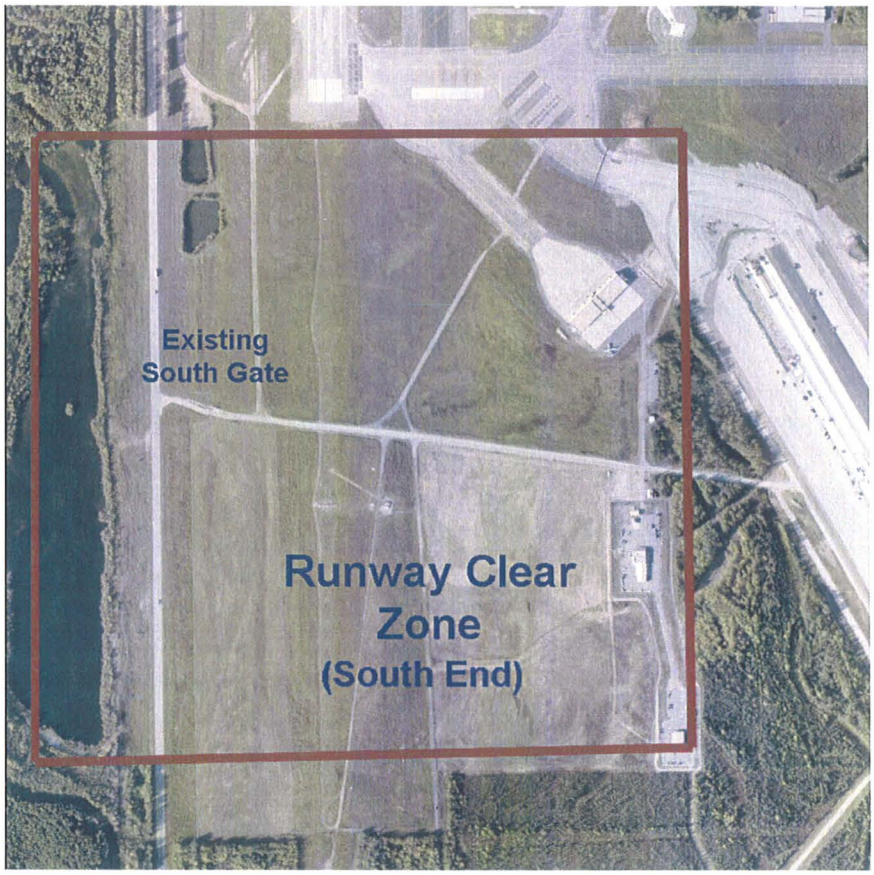


Figure 1-3 – Runway Clear Zone at South End of Runway

1.3 Decision to be Made and Decision Maker

1.3.1 As required by 32 CFR Part 989, the *Environmental Impact Analysis Process* will be used to determine what are the potential environmental consequences of constructing a new gate and access road at the south end of the base. This Environmental Assessment (EA) is intended to satisfy these requirements. The proposed action and all alternatives considered will be addressed in detail in Section 2.0 of this document. A description of the resources associated with the areas affected by all alternatives will be provided in Section 3.0 and the impacts that could result from each one are discussed in Section 4.0.

1.3.2 Based on the evaluation of impacts in the EA, a Finding Of No Significant Impact (FONSI) will be published if there is a finding of no significant environmental impacts for the proposed action. If it is determined that the proposed action will have significant environmental

impacts, other alternatives will be considered for which impacts may not reach the threshold of significance.

1.3.3 The EA, a draft FONSI (if applicable), and all other appropriate planning documents will be provided to the PACAF Vice Commander, the decision maker, for review and consideration. If, based on a review by the decision maker of all pertinent information, a FONSI is proposed, a public notice will be published in accordance with 40 CFR 1506.6. All interested parties will have 30 days to comment on the decision to the Air Force. If, at the end of the 30-day public comment period, no substantive comments are received, the decision maker (or his delegatee) will sign the FONSI.

1.3.4 Executive Orders 11988 and 11990 requires the heads of federal agencies to find that there is no practicable alternative before the agency takes certain actions impacting wetlands or 100-year floodplains. To address this requirement, the Secretary of the Air Force's designated agent, HQ PACAF/A7, will sign a document that addresses the issues of wetlands and floodplains that may be associated with actions the Air Force proposes to take. This document, known as a Finding Of No Practicable Alternative (FONPA), will state which alternative, the proposed action, the alternative project, or the no action alternative, will be selected as the appropriate course of action. The FONPA will be combined with the FONSI into one document. It will contain documentation that all practicable measures to minimize harm to wetlands and/or floodplains have been taken, and that all appropriate mitigation will be incorporated into the project design or otherwise authorized.

1.4 Project Scoping/Significant Issues. This section provides a summary of all issues raised during the scoping process. The scoping process involved meeting with potentially interested parties, including state and federal regulatory agencies and base groups that have regulatory responsibility or interest in the proposed project. The US Army Corps of Engineers was the only agency to participate in the scoping process other than Eielson groups.

1.4.1 *Value of Habitat Slated for Elimination:* The wetlands that would be impacted by the project, classified as black spruce scrub/shrub, were determined to be relatively low in value. Also discussed was the fact that these wetlands were in the Bird Exclusion Zone and serve as an attractant to birds that pose a bird air strike hazard for aircraft that use Eielson. Elimination of wetlands in this area is considered beneficial from an aircraft safety perspective.

1.4.2 *Base Security:* A major issue that is driving the need for this project is Security Forces' need for a better way to adequately inspect and process commercial vehicles. The existing access gate for the south end of the base does not meet force protection standards and is in the clear zone of the runway. When aircraft are taking off or landing, vehicle traffic in the clear zone is prohibited. Air Force Bases are also required to have two entry/exit points that are designed to meet force protection standards. Eielson currently has only one, the New Hursey Gate.

1.5 Federal, State, or Local Permits Needed for Project Implementation

A Section 404 wetlands permit issued by the US Army Corps of Engineers would be required for the construction of the proposed action. None of the other alternatives would require a federal, state, or local permit.

2.0 Description of the Proposed Action and Alternatives

Section 2.0 provides a description of alternatives considered to achieve the purpose and need described in Section 1.0. The proposed action, two action alternatives, and the no action alternative are addressed.

2.1 Criteria used for selection of the Proposed Action and Alternatives

The following criteria have been used in formulation of the proposed action and (note: not all alternatives meet all criteria):

- Structures associated with the gate and access road should be outside the limits of the runway clear zone.
- Route of access road should avoid, to the extent possible, higher density population area of the base.
- Design of the gate should meet force protection standards.
- Location of gate and access road should help to relieve traffic congestion.

2.2 Proposed Action – Construct a New South Gate and Access Road

2.1.1 The project would be sited at the very southern end of the flightline, just beyond the edge of the runway clear zone. This would prevent traffic movement from being restricted during periods that aircraft would be taking off and landing (Figure 2-1).

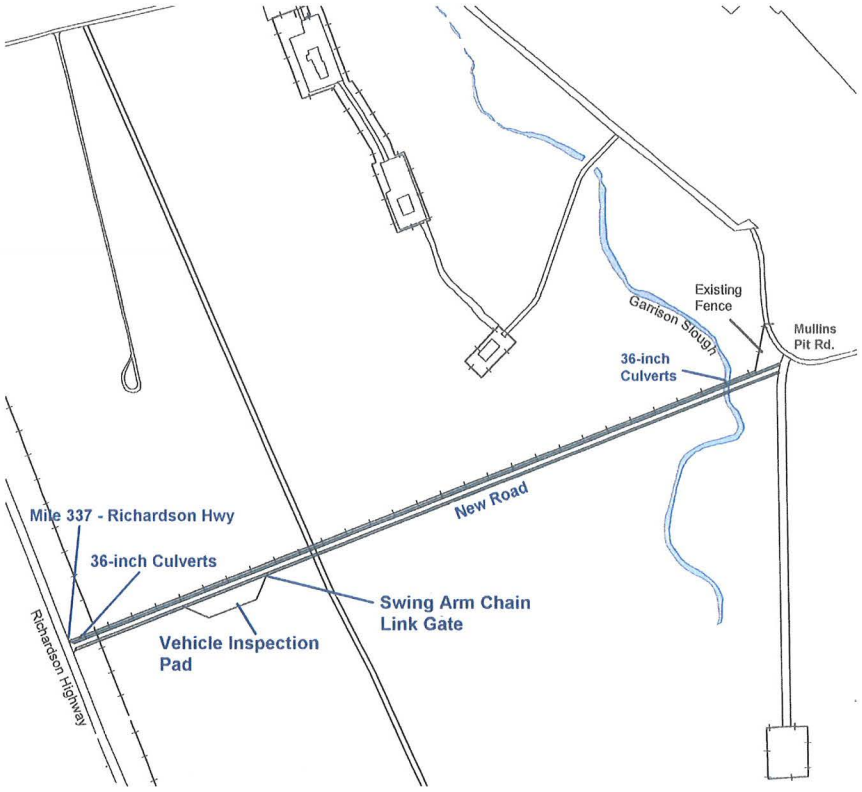


Figure 2-1 – Proposed Project Location

2.2.2 The proposed project would result in the following structures being constructed in conjunction with a new South Gate Road:

- A 24-foot-wide chain link swing gate
- A 124-foot-wide and 450-foot-long vehicle inspection pad
- A 24-foot crown width road that is 3,759-foot-long
- Two batteries of 36-inch culverts to maintain adequate surface drainage, including a crossing of Garrison Slough

2.2.3 Construction of the road and inspection pad would require use of the following materials:

- 15,434 cubic yards of gravel fill
- 10,215 cubic yards of chunk asphalt
- 6,163 cubic yards of crushed asphalt
- 10 cubic yards of bull rock
- 36 cubic yards of concrete

The gravel fill would be obtained from Mullins Pit, a gravel mine located on Eielson. The asphalt would be obtained from the base's recycled asphalt stockpile and the bull rock and concrete from an off-base source. The placement of these materials would result in impacts to 4.5 acres of black spruce wetlands. Vegetation in the project area would be removed by a hydroaxe prior to construction.

2.3 Alternative 1 – Upgrade Existing South Gate and Access Road

2.3.1 This alternative would result in modifications and improvements to the existing south gate and access road. This gate currently does not provide adequate access from the Richardson Highway for large commercial vehicles, does not have a gate that meets force protection standards, and is without a vehicle inspection facility. In addition, the existing access road is too narrow and needs to have its surface improved and widened to adequately handle large commercial traffic. To bring the existing gate and road up to required standards, the following work would be undertaken (see Figure 2-2):

- The existing road surface would be widened to 24 feet and a 2-foot lift of gravel would be placed on the road surface to bring it up to the required elevation. This would involve the placement of 8,340 cubic yards of gravel for a road bed. In addition, 5,850 cubic yards of crushed asphalt would be placed on the road to provide a finished surface.
- A 24-foot-wide chain link swing gate would be constructed in place of the existing gate.
- Two batteries of 36-inch culverts would be placed in the road at two locations to maintain adequate cross drainage. Approximately 2,380 cubic yards of gravel would be needed for installation of the culverts.

2.3.2 Although the proposed improvements would bring the existing road and gate up to design standards necessary for operation of the road, the location of the gate and road would still be in the runway clear zone and would necessitate the stopping of traffic during aircraft take off and landing. This would create delays and cause a backup of traffic during flying hours. At this

location, structures such as a guard house and inspection facility shelter could interfere with the operation of the runway instrument landing system (ILS). To avoid interference with the Construction of a gate at this location would require that no permanent structures over 11 feet high could be constructed as part of the gate to avoid interfering with the runway ILS.

2.3.3 The upgrading of the existing south gate would result in impacts to approximately 0.2 acres of riverine wetlands. These wetlands are located where the existing road crosses Garrison Slough.

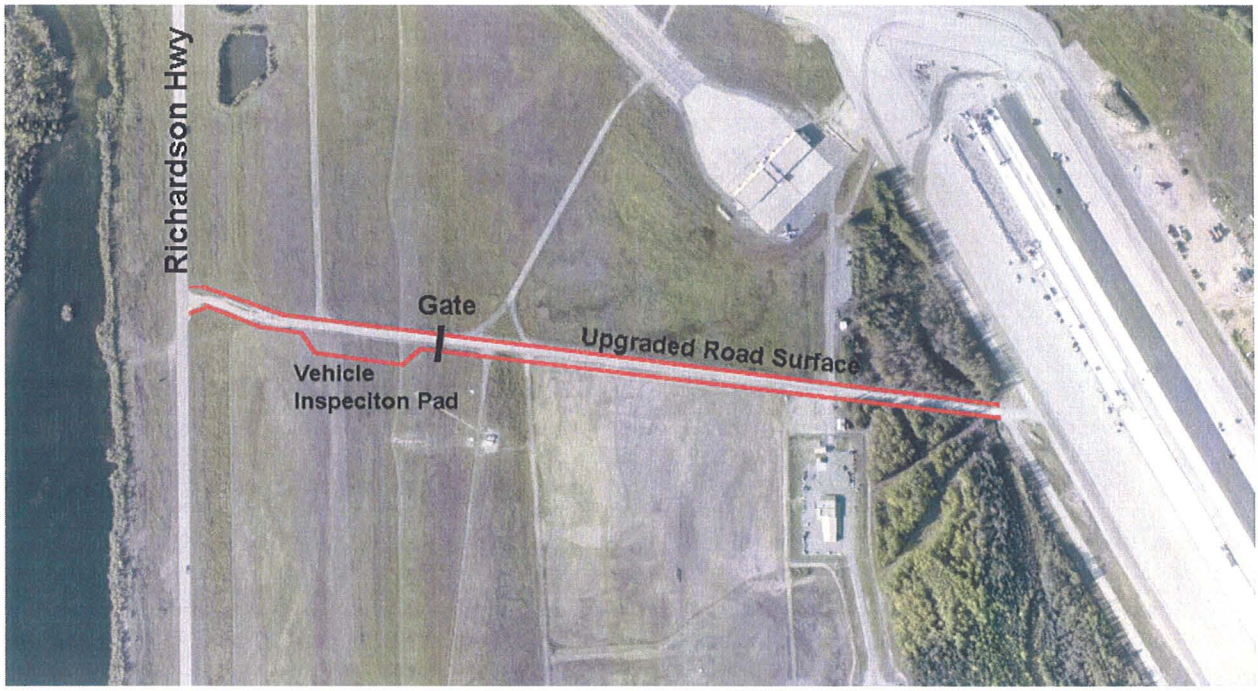


Figure 2-2 – Alternative 1 Proposed Improvements

2.4 Alternative 2 – Reopen Old Hursey Gate for Commercial Traffic

2.4.1 This alternative would utilize the old, now closed, old Hursey Gate. Prior to the construction of the new gate in 2005, the old Hursey Gate was the main entry point for traffic entering the base. Automobile traffic, as well as large commercial traffic, entered through this gate. Alternative 2 would reconfigure the old gate to better accommodate large commercial vehicles and add a vehicle inspection facility as part of the complex (see Figure 2-3).

2.4.2 To implement this alternative, the following actions would be required:

- Reconfigure the traffic entry point off the Richardson Highway to allow large vehicles to enter the gate from the northbound lane of the Richardson Highway.
- Construct a pull out area on the shoulder of both the north bound and south bound lanes of the Richardson Highway to allow large vehicles to stage while awaiting entry onto the base.
- Construct a vehicle inspection pad.

- Improve existing gate structure to meet current force protection standards.
- A total of 5,944 cubic yards of gravel and 1,850 cubic yards of asphalt would be required to build the structures proposed for alternative 2.

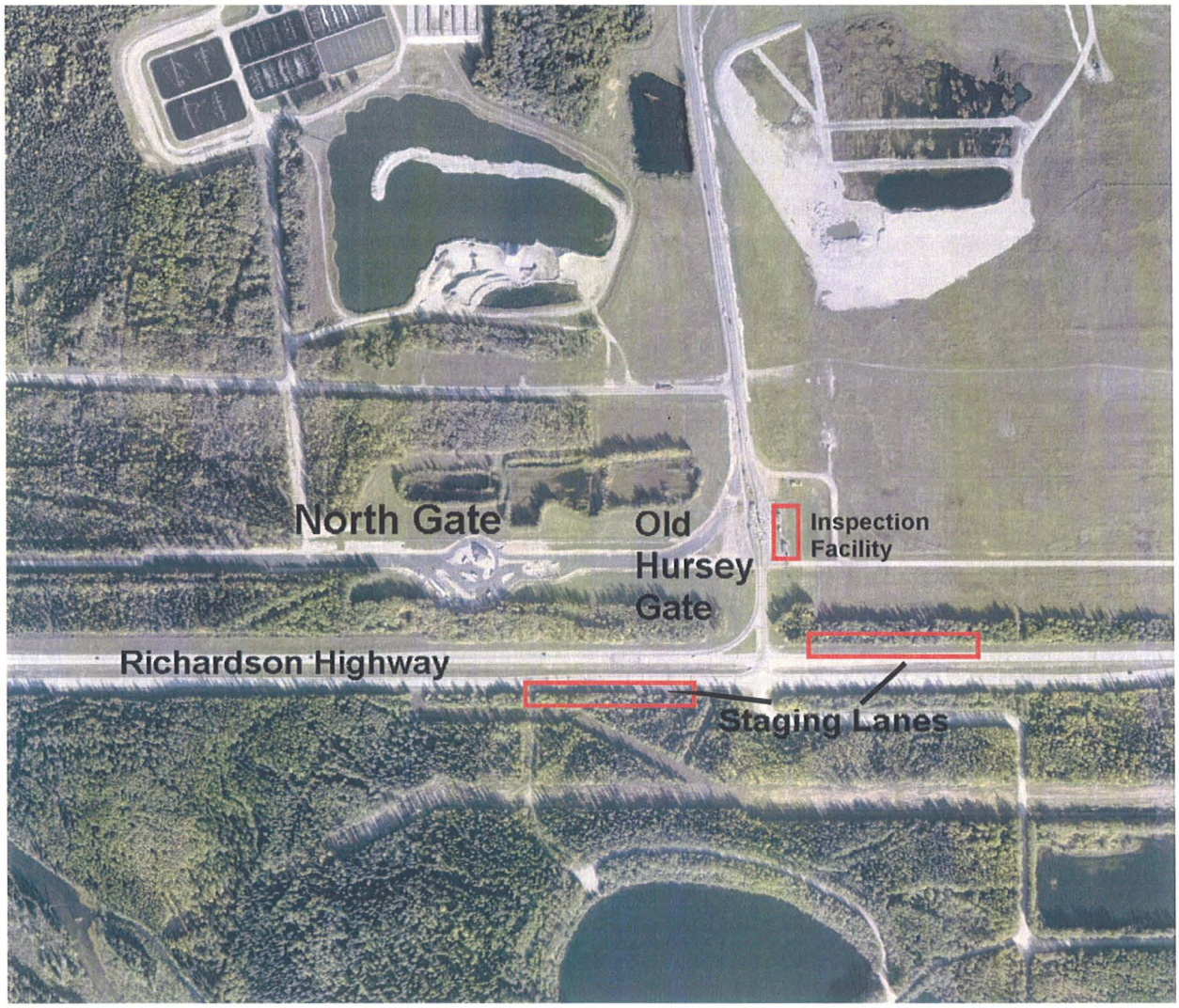


Figure 2-3 – Alternative 2 Proposed Work

2.5 No Action Alternative

The no action alternative would result in the continued use of the Hursey Gate that was built in 2005. All large commercial vehicles and munitions shipments would be inspected and processed through this gate.

Table 2-1 – Impact Comparison Matrix

Resource	Proposed Action	Alternative 1	Alternative 2	No Action
Soils	Proposed action would result in placement of 31,858 cubic yards of gravel, rock, and asphalt for road and facility construction, impacting 4.5 acres of wetlands.	Alternative 1 would require the placement of 14,190 cubic yards of gravel and asphalt for construction of facility improvements, affecting mostly previously disturbed soils.	Alternative 2 would result in the placement of 7,794 cy of gravel and asphalt. Work would impact 0.25 acres of previously undisturbed forest.	No impacts to soils would result from the no action alternative.
Surface Water	The proposed action would have minor impacts to Garrison Slough from construction of a culverted crossing for the proposed access road.	Alternative 1 would also result in some minor impacts to Garrison Slough, but less than the proposed action, as it would require only modifications to an existing crossing.	No impacts to surface water resources would result from this alternative.	No impacts to surface water resources would result from the no action alternative.
Wetlands	Approximately 4.5 acres of relatively low value black spruce scrub/shrub wetlands would be impacted.	Alternative 1 would result in the loss of 0.2 acres of riverine wetlands from the widening of the culvert crossing of Garrison Slough.	No impacts to wetlands would result from this alternative.	No impacts to wetlands would result from the no action alternative.
100-Year Floodplain	The proposed action could result in minor impacts to the 100-year floodplain from the construction of a culverted crossing of Garrison Slough.	Alternative 1 could result in very minor impacts to the 100-year floodplain. Since there is an existing crossing of the slough with this alternative, the overall impact would be less than the proposed action.	No impacts to the 100-year floodplain would result from this alternative.	No impacts to the 100-year floodplain would result from the no action alternative.
Safety	No impacts to safety, project in compliance with all Air Force safety standards.	Would continue runway clear zone violations and associated safety hazards.	Would create runway clear zone violations .	Would create runway clear zone violations .
Noise	Minor, short-term impacts from machinery noise would result from this alternative.	Impacts would be similar to those for the proposed action and alternative 1.	Similar impacts to the proposed action.	No impacts from noise would result.
Air Quality	Minor, short-term impacts to air quality from machinery exhaust and fugitive dust could result from the proposed action.	Alternative 1 could also result in minor, short-term impacts from machinery exhaust and fugitive dust.	Alternative 2 could result in some short term impacts from machinery exhaust and fugitive dust.	No impacts to air quality would likely result from this alternative.
Biological Resources/ Wildlife	This action would result in the loss of 4.5 acres of wetlands that provide habitat for a few species of passerine birds and small mammals. These species would be displaced to nearby similar habitat.	Area affected by alternative 1 is previously impacted by airfield related work. Loss of 0.20 acres of riverine habitat associated with slough crossing widening. This provides habitat for nesting and roosting of some passerine bird species.	Alternative 2 would impact 0.25 acres of birch and aspen forest and result in loss of bird and small mammal habitat. Species would be displaced to adjoining habitat.	No impacts to wildlife habitats would likely result from this alternative.

3.0 Affected Environment

This section describes relevant resource components of the existing environment that might be impacted by the proposed project and alternatives. Only environmental components relevant to the issues and objectives of this EA are described.

3.1 Physical Environment

Eielson encompasses approximately 19,790 acres and is isolated from major urban areas. The portion of Eielson that contains the areas associated with the action alternatives lies on the abandoned floodplain of the Tanana River, with elevations ranging from 525 to 550 feet above mean sea level. The surface of the floodplain is relatively smooth and slopes gently downward to the northwest at a gradient of about 6 feet per mile.

3.1.1 Geology/Soils

3.1.1.1 The area in the vicinity of Eielson was not glaciated during the last ice age. The majority of the subsurface geologic formations of the central plateau of Alaska are primarily from the Permian and Devonian periods of the Paleozoic era.

3.1.1.2 Soils in the Tanana River Valley consist of unconsolidated silty sands and gravels, organic and sandy silts, and clays. Floodplain soils nearest the active channels are sandy with a thin silt loam layer on the surface. On higher terraces, the soils become predominately silt from the Salchaket series. Along older river terraces, silt loam soils which contain significant organic components often dominate. These soils tend to be cold and wet and are generally underlain by permafrost. Approximately two-thirds of Eielson AFB is covered with soils containing discontinuous permafrost. This preponderance of permafrost soils contributes to the large percentage of vegetated wetlands occurring on undeveloped base lands.

3.1.1.3 The developed portion of the base has, to a large extent, been constructed by filling above the estimated 100-year flood elevation with gravel from local borrow pits. Most of these areas, prior to being filled, were functioning wetlands similar to areas in the clear zone that are proposed for vegetation removal and leveling. Soils in the proposed project area are intact and have not been disturbed. They are hydric soils underlain by discontinuous permafrost.

3.1.2 Groundwater

Eielson is located over a shallow, unconfined aquifer. The depth of the aquifer is not known as the depth to bedrock in the vicinity of the base has not been established. The aquifer has a regional gradient of about 5 feet per mile flowing to the north-northwest. The water table varies from the surface in adjacent wetlands to 10 feet below ground level in developed areas. The base uses the local aquifer for its drinking water and monitors groundwater quality in a number of locations as part of its Installation Restoration Program. Localized contamination of the aquifer has been identified in the industrial area of the base, but the overall quality of groundwater at Eielson is excellent.

3.1.3 Surface Water and Wetlands

3.1.3.1 Aquatic bodies on Eielson include streams, wetlands, and lakes. There are approximately 28 miles of streams; 10,133 acres of wetlands; 12 lakes (Lilly Lake is natural and the remaining 11 are man-made) and 80 ponds (10 naturally-occurring and 70 man-made) totaling 560 acres; and 6,770 acres of floodplains on the main base. The man-made lakes and ponds were created during the excavation of gravel deposits for use as fill material for construction projects on base. Surface drainage on Eielson is generally in a north-northwest direction and parallel to the Tanana River. Five streams flow through the base and discharge into the Tanana River via Piledriver Slough.

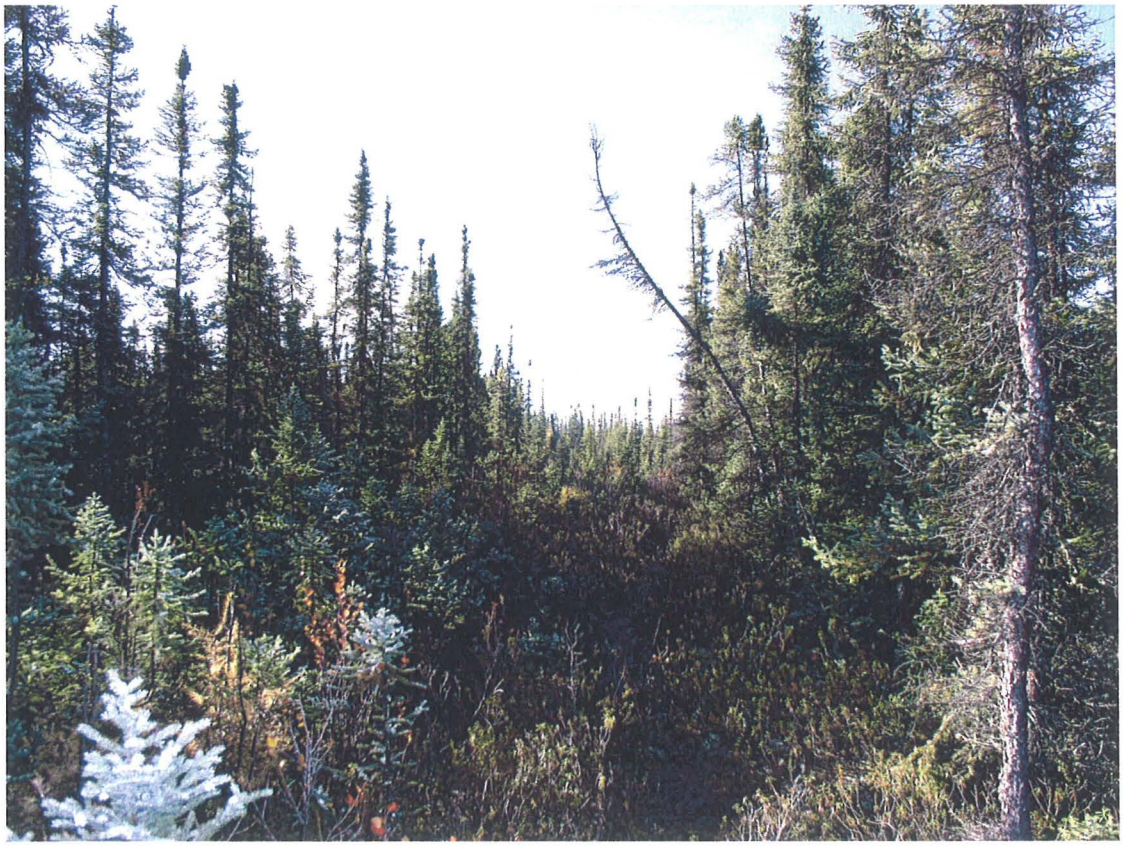


Figure 3-1 – Wetland Vegetation in the Vicinity of the Proposed Project

3.1.3.2 Approximately 51 percent, or 10,133 acres, of Eielson's undeveloped land is classified as wetlands with 9,391 acres being vegetated wetlands and the remainder being lakes, ponds, and streams (see Figure 3-1). Wetlands and low-gradient, alluvial streams comprise most of the surface water resources on Eielson, with wetlands dominating the low-lying areas within and surrounding the installation. Most wetland areas were created as a result of surface waters becoming trapped in the thawed layer over the permanently frozen subsurface (permafrost). Flood periods tend to occur during spring snowmelt and in middle to late summer when heavy rains or warm air quickly brings glacier fed mountain streams to flood capacity. Several lakes and extensive wetlands surround the airfield in the cantonment area. Among these are Bear,

Polaris, Moose, Hidden, Pike, Rainbow, Scout, Grayling, and Tar Kettle lakes. Creeks that can be found in the vicinity of the airfield include French and Moose creeks.

3.1.3.3 Piledriver and Garrison sloughs are the two largest streams in the vicinity of the airfield. Piledriver Slough, which discharges into the Tanana River, is located along the western edge of Eielson, approximately 4,000 feet west of the airfield, and flows parallel to the runway. Approximately 12 miles of Piledriver Slough occurs on Eielson. The slough receives no runoff from the urban, developed area of the base and has good water quality. Garrison Slough is a small drainage that goes through the heart of the industrial area of the base. In addition to normal surface runoff, Garrison Slough also receives input from groundwater and discharge water from the drinking water treatment plant that is located adjacent to the slough approximately 2 miles downstream from the project area. The course of Garrison Slough has been channelized and straightened over the years as the base has expanded and developed and encroached on the stream. Water quality of Garrison Slough is generally good with the exception of elevated levels of polychlorinated biphenyls (PCBs) in a segment approximately 3 miles downstream from the project area. Fishing in that portion of the stream has been designated off-limits because of the potential for bioaccumulation of PCBs in fish tissue.

3.1.4 Floodplains

Portions of Eielson are within the 100-year floodplains of several streams, including French Creek, Moose Creek, Garrison Slough, and Piledriver Slough. The project areas associated with the proposed action and alternative 1 have a small portion that lies within the 100-year floodplain of Garrison Slough (less than 0.01 acres). This is where the existing South Gate Road crosses the slough and also where the route of the proposed new road would cross the slough. Both of these locations are quite high up in the watershed of the stream, within a mile of its source. Floodplains of streams in the vicinity of Eielson are all part of the floodplain of the Tanana River, one of the largest watersheds in Alaska. These floodplains are generally very broad with only slight gradients, usually less than 5 feet per mile. This results in floodplains that have potentially large flood buffering capacities.

3.1.5 Safety

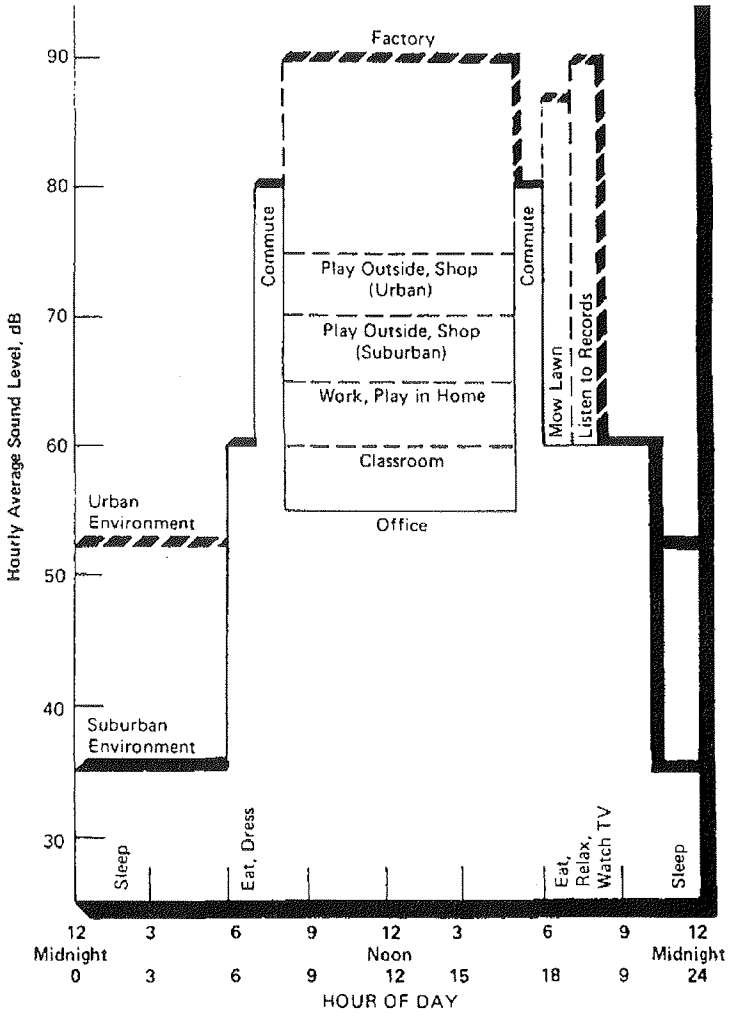
3.1.5.1 Operational activities conducted by the Eielson are performed in accordance with applicable Air Force safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force Occupational Safety and Health requirements. To minimize the results of a potential accident involving aircraft operating from Eielson, clear zones (CZ), accident potential zones (APZ), and safety zones (SZ) have been established around the airfield. In developing these zones, Eielson is considered to have one Class B runway. Within a CZ and SZ, construction is either prohibited (CZ) or limited in terms of facility placement and height (SZ).

3.1.5.2 The CZ is an area at each end of the runway that is 3,000-foot-wide by 3,000-foot-long. The accident potential in this area is so high that no building is allowed. The old Hursey Gate and the old south gate were both in the CZ and required a waiver for their operation. The Air Force has, in recent years, denied most requests for waivers of structures in the CZ as they are actively trying to get bases to eliminate circumstances that would otherwise require waivers.

3.1.5.3 In addition to aircraft operations safety, other operational safety concerns that currently exist at Eielson is with the transport of hazardous materials and hazardous waste on and off the base. Currently all shipment of these types of materials must be through the new Hursey Gate, requiring that it come in close proximity to the higher population areas of the base and through the same gate as passenger traffic, both civilian and military.

3.1.6 Noise

Aircraft generate by far the most noise on Eielson. Noise levels associated with aircraft during flying hours can exceed 80 decibels (dB) in the vicinity of the flightline, however, the decibel level drops off to a maximum of 70-dB in the closest residential area, Moose Creek, just north of the base. Construction noise is potentially another source of noise, but it is not considered to be a concern due to its temporary nature and relatively low dB level. Figure 3-2 is a chart that provides a scale of noise levels associated with typical daily activities. None of the noise anticipated from activities associated with any of the action alternatives would exceed levels that would be of concern and would be far lower than any levels that are currently generated by aircraft operating at the base.



Source: *Noise Effects Handbook*, U.S. EPA 1981

Figure 3-2 – Noise Levels

3.1.6 Air Quality

3.1.6.1 Air quality is generally good at Eielson. Although portions of the North Star Borough (Fairbanks and North Pole) of which Eielson is also a part of are in maintenance status for carbon monoxide, Eielson is far enough south to not be included or affected. The Clean Air Act designates areas as *attainment, non-attainment, maintenance,* or *unclassified* with respect to national ambient air quality standards (NAAQS). Non-attainment and maintenance areas are locales that have recently violated one or more of the NAAQS and must satisfy the requirements of State and Federal Implementation Plans to bring them back into conformity with the applicable air quality standards. Eielson is located in an *unclassified* area, and activities that generate emissions do not need to satisfy the requirements of the Environmental Protection Agency ruling *Determining Conformity of General Federal Actions to the State or Federal Implementation Plans.*

3.1.6.2 Other conditions that can affect Eielson's air quality include forest fire generated smoke from off-base sources and fugitive dust generated by on-base road traffic. Forest fires generally occur during the dry months of June and July. Fugitive dust from road traffic is generally quite localized and can be controlled through the use of best management practices. Eielson's Title V air permit from the EPA requires that, when conditions dictate, measures be taken to reduce fugitive dust.

3.1.7 Cultural Resources

In 1994, Eielson contracted for the preparation of a predictive model for the discovery of prehistoric and historic cultural resources on base lands. The predictive model was then used to conduct an evaluation of cultural resources on Eielson as required by Section 110 of the National Historic Preservation Act. The areas associated with the proposed action and alternatives 1 and 2 have been determined to not contain cultural or archeological resources. In the event that during project excavation/construction any cultural resources were encountered, activities would cease until the resources were evaluated.

3.2 Biological Resources

3.2.1 Vegetation

3.2.1.1 The vegetation of the Tanana River Valley in the vicinity of Eielson is typical of boreal forest or taiga habitats. The boreal forests of Eielson are predominantly evergreen forests dominated by black spruce and white spruce (*Picea glauca*), but also include extensive stands of deciduous forests containing paper birch (*Betula papyrifera*), quaking aspen (*Populus tremuloides*), and balsam poplar (*P. balsamifera*). Extensive areas of shrub and herbaceous vegetation are found in wetlands, lowland areas, and the active floodplain, and are dominated by willows and other shrubs, sedges, and grasses. Bog areas are dominated by black spruce stands intermixed with peat moss (*Sphagnum* spp.) and cottongrass (*Eriophorum vaginatum).*

3.2.1.2 Vegetation at the project site (Figure 3-1) falls into two more or less distinct regimes, upland and wetland. The upland areas are characterized by forbs and grasses that have colonized

the built up areas associated with the flightline. The wetland portion of the site is a typical black spruce scrub/shrub wetland. Garrison Slough flows through the area associated with the proposed project and alternative 1 and displays typical riverine wetland vegetation in this area including willow and alder scrub/shrub.

3.2.2 Aquatic/Fishery Resources

3.2.2.1 Lakes and streams on Eielson contain both native fish and fish stocked by the Alaska Department of Fish and Game. Native fish found in the Tanana River drainage include chinook salmon (*Oncorhynchus tshawytscha),* chum salmon (*O. keta*), silver salmon (*Oncorynchus kisutch*), burbot (*Lota lota*), arctic grayling (*Thymallus arcticus*), northern pike (*Esox lucius),* chub (*Semotilus* spp.), several species of whitefish (*Coregonus* spp.), sheefish (*Stenodus leucichthys nelma),* rainbow trout (*Oncorhynchus mykiss*), and arctic char (*Salvelinus alpinus).*

3.2.2.2 The Alaska Department of Fish and Game stocks five lakes and one stream on Eielson: Grayling Lake, Hidden Lake, Polaris Lake, 28 Mile Pit, Moose Lake, and Piledriver Slough. Fish stocked by the Alaska Department of Fish and Game include rainbow trout, arctic grayling, arctic char, silver salmon, chinook salmon, chum salmon, and northern pike. There are no known federally listed threatened or endangered fish species, fish species proposed for listing, or critical fish habitats on Eielson.

3.2.2.3 Garrison Slough, which traverses the project area, was previously considered a fish bearing stream in this reach of the slough. However, at the request of the Alaska Department of Fish and Game, Eielson has installed a fish barrier at a point approximately 3 miles downstream of the project area that blocks adult fish migration from entering the stream in the vicinity of the project. This barrier was installed due to the presence of elevated levels of PCBs. Recent fish electroshocking in the slough has resulted in only a few fish being taken. They are the result of small juvenile fish passing through the fish barrier screen. The stream is considered to no longer have a sustainable fish population.

3.2.3 Wildlife Resources

3.2.3.1 The surrounding Tanana Valley provides breeding habitat for a wide variety of migratory bird species. Bird species found on Eielson include spruce grouse *(Dendragapus canadensis*), ruffed grouse (*Bonasa umbellus*), northern goshawk (*Accipiter gentilis*), sharp-shinned hawk (*A. striatus*), great horned owl (*Bubo virginianus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). During winter, willow ptarmigan (*Lagopus lagopus*) and rock ptarmigan (*L. mutus*) are common on Eielson. Over 20 species of waterfowl including geese, ducks, loons, grebes, and scoters use aquatic habitats located on base lands.

3.2.3.2 Several species of upland birds inhabit habitats available on Eielson. These include plovers, sandpipers, grouse, woodpeckers, swallows, and several species of warblers and sparrows.

3.2.3.3 There are 32 species of mammals found on Eielson. Common species include moose (*Alces alces*), black bear (*Ursus americanus*), grizzly bear (*U. arctos*), snowshoe hare (*Lepus*

americanus), marten (*Martes americana*), red squirrel (*Tamiasciurus hudsonicus*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), mink (*Mustela vison*), meadow vole (*Microtus pennsylvanicus*), red-back vole (*Clethrionomys rutilus*), and meadow jumping mice (*Zapus hudsonius*).

3.3 Threatened and Endangered Species

No threatened or endangered species, as designated by the US Fish and Wildlife Service, typically occur in any of the project areas included in the listed alternatives. This was the conclusion of an Eielson contract study entitled *Biological Survey, Final Report 1994,* that addressed the potential for the presence of endangered species on Eielson lands.

4.0 Environmental Consequences

This section is the scientific and analytic basis for the comparison of alternatives. Section 4 also describes the probable environmental consequences (impacts, effects) of the proposed action, the two action alternatives, and the no action alternative. This section is organized according to resources, and a discussion of each alternative action is discussed relative to resources identified as relevant.

4.1 Physical Environment

4.1.1 Geology/Soils

4.1.1.1 Proposed Action - Construct a New South Gate and Access Road. The proposed action would result in the alteration of approximately 4.5 acres of scrub/shrub black spruce wetlands. Natural soil profiles would not be disturbed, but as much as 5 feet of fill material including gravel and asphalt would be placed on top of existing soils.

4.1.1.2 Alternative 1 - Upgrade Existing South Gate and Access Road. This alternative would result in only minor, physical alterations of the project site. The existing road that traverses the area between the Richardson Highway and the Loop perimeter road is not up to the standard needed for large commercial vehicles and would need to be widened and its bed thickened. Existing soil profiles would not be disturbed, only covered over. In addition, the existing road crossing of Garrison Slough would need to be widened by about 15 feet resulting in the placement of gravel fill in 0.2 acres of riverine wetlands.

4.1.1.3 Alternative 2 - Reopen old Hursey Gate for Commercial Traffic. This alternative would result in some physical alteration of existing features. Some trees would be hydroaxed and organic rich soils removed and replaced with alluvial gravels that would serve as a roadbed for vehicle traffic. Asphalt would be placed on top of the gravels to provide a finished surface.

4.1.1.4 No Action Alternative. This alternative would have no impact on the physical environment.

4.1.2 Groundwater

The water table on Eielson varies from the surface in adjacent wetlands to 10 feet below ground level in developed areas. In the vicinity of the proposed project and alternatives 1 and 2, groundwater is found at varying depths. Since none of the action alternatives require excavation to a depth that would reach groundwater, it is felt that no impacts to groundwater would occur from any of these alternatives.

4.1.3 Surface Water and Wetlands

4.1.3.1 Proposed Action - Construct a New South Gate and Access Road. The proposed action would result in only minor impacts to surface water resources. The only surface water body that would be impacted by the proposed action is Garrison Slough. The access road would cross the

slough using two 36-inch culverts. During installation of the culverts, some minor, short-term increases in suspended sediment load would likely occur. Wetlands, however, could experience more substantial impacts from the proposed project. Loss of approximately 4.5 acres of black spruce scrub/shrub wetland habitat would result from construction of the access road and vehicle inspection pad.

4.1.3.2 Alternative 1 - Upgrade Existing South Gate and Access Road. The existing surface water hydrology would remain intact under this project alternative. Additional culverts would be installed at two locations to ensure that this occurred. A loss of approximately 0.2 acres of riverine wetlands in conjunction with the culvert crossing of Garrison Slough would occur. No other impacts to surface water or wetland resources would likely occur from this alternative.

4.1.3.3 Alternative 2 - Reopen old Hursey Gate for Commercial Traffic. This alternative would likely have no impact on surface water or wetland resources.

4.1.3.4 No Action Alternative. The no action alternative would not impact surface water resources or wetlands.

4.1.4 Floodplains

The crossings of Garrison Slough that would be built in the proposed action, or modified in alternative 1, would cause little or no reduction in the flood water retention capabilities of the watershed. The crossings would be culverted adequately to ensure that peak flows (spring breakup or summer rainstorm events) are facilitated. There would likely be little or no impact on floodplains from any of the action alternatives.

4.1.5 Safety

4.1.5.1 Proposed Action – Aircraft operational safety is of paramount importance at Eielson. The construction of a new south gate and access road at the location proposed would ensure that all runway clear zone safety requirements be met. In addition, the new south gate would allow the movement of hazardous materials and waste on and off the base at a location that avoids passing through higher population areas of the base and mingling with passenger traffic, both civilian and military. The speed of traffic at this portion on the Richardson Highway is higher (65 miles per hour) and could increase the chance traffic accidents for turning traffic. Signs, temporarily reducing traffic speeds could be placed during times that the gate would be in use.

4.1.5.2 Alternative 1 – The existing south gate road is located within the runway clear zone and would present a safety hazard/violation with respect to aircraft operations.

4.1.3.3 Alternative 2 – Reopen Old Hursey Gate for Commercial Traffic. This alternative would require that the gate facility be located in the runway clear zone, violating Air Force safety standards. It would also result in the movement of hazardous materials and waste through the denser populated areas of the base and interact with automobile traffic, both civilian and military. In addition, if an emergency were to close or otherwise impact the new Hursey Gate it would also cause disruption to traffic through the old Hursey Gate due to their close proximity.

4.1.3.4 No Action Alternative. The no action alternative would result in the continued use of the existing south gate road, resulting in a violation of Air Force runway safety standards.

4.1.6 Noise

The proposed action, as well as alternatives 1 and 2, could potentially result in noise impacts. They would be minor and highly localized, however, mainly from operation of equipment during the construction phase of the project.

4.1.6 Air Quality

Activities associated with all three action alternatives could be a minor source of impacts to air quality. These impacts would likely result from machinery exhaust and fugitive dust generated by equipment operation during construction and by truck traffic use once the South Gate Road is operational. Eielson is required by its EPA Title V permit to take measures to reduce fugitive dust. Typical measures taken for this project might include:

- Water application as needed on all unpaved parking, staging, and driving surfaces.
- Limiting traffic speeds on all unpaved roads.
- When feasible, covering truck loads.
- Use of street sweepers on paved road surfaces to keep free of dust buildup.

4.1.7 Cultural Resources

There are no identified cultural resources in the vicinity of any of the project areas. Therefore, it is unlikely that impacts to cultural resources would occur from any of the action alternatives. In the event any resources were uncovered, activities would cease until a qualified archeologist assessed the find.

4.2 Biological Resources

4.2.1 Vegetation

4.2.1.1 Proposed Project - Construct a New South Gate and Access Road. Vegetation associated with the site has been characterized as typical of black spruce scrub/shrub wetlands. Construction of the access road and the vehicle inspection pad would require that vegetation be removed by hydro-axe. This would result in all trees and shrubs being cut down to ground level. After vegetation is removed, gravel would be placed to construct the roadbed and inspection pad. These activities would result in the total removal and covering over with gravel of approximately 4.5 acres of wetland vegetation.

4.2.1.2 Alternative 1 - Upgrade Existing South Gate and Access Road. This alternative would result in the loss of a small amount of vegetation that would be covered as part of the widening of the existing roadbed. Vegetation impacted would be mostly grasses and forbs.

4.2.1.3 Alternative 2 - Reopen old Hursey Gate for Commercial Traffic. Reopening the old Hursey Gate and construction of a vehicle inspection pad and two vehicle pull offs along the Richardson Highway would result in impacts to vegetation, primarily in the form of tree clearing. Removal of approximately 0.25 acres of mixed aspen/birch forest would be required for construction of the structures associated with this alternative.

4.2.1.4 No Action Alternative. This alternative would have no impact on vegetation.

4.2.2 Aquatic/Fishery Resources

Impacts to aquatic resources could result from construction of the road crossings of Garrison Slough that would be undertaken in conjunction with the proposed action and alternative 1. The proposed action would result in more extensive impacts as it would require an entirely new culverted crossing of Garrison Slough. The crossing required in alternative 1 would just be a slight widening (by 15 feet) of an existing culverted stream crossing. The impacts for both alternatives would be minor and would be mainly from elevated sediment loads during instream work to install the culverts. The culvert installation would occur during a low-flow period (midsummer) to minimize these types of impacts. No impacts to fish habitat would occur with this work as few, if any, fish reach this far up stream.

4.2.3 Wildlife Resources

4.2.3.1 Proposed Project - Construct a New South Gate and Access Road. The proposed project would result in the loss of approximately 4.5 acres of black spruce scrub/shrub wetland habitat. The area impacted currently provides moderate to low-value habitat to a variety of wildlife species. Passerine birds use the area for roosting and nesting. Large mammals, such as moose, use the area for browse while passing through the area and small mammals such as snowshoe hare, red squirrel, and voles use the area for denning. Most, if not all of these wildlife species would move to adjacent areas that exhibit the same habitat characteristics resulting in no population level impacts.

4.2.3.2 Alternative 1 - Construct a New South Gate and Access Road. Impacts associated with this alternative would be minimal. They would include the additional area affected by the widening of the existing road bed and the area used to construct a vehicle inspection pad. These are areas that have been previously impacted and where little or no wildlife habitat presently exists. These areas were leveled and filled during a previous flightline improvement project. The existing road crossing of Garrison Slough would be widened by 15 feet resulting in the loss of 0.2 acres of riverine habitat. This would result in the loss of a small amount of bird nesting and roosting habitat.

4.2.3.3 Alternative 2 - Reopen old Hursey Gate for Commercial Traffic. Construction of facilities proposed for alternative 2 would impact approximately 0.25 acres of mixed aspen/birch hardwood forest. These areas currently provide moderately productive nesting habitat for birds, including passerines, raptors, and ruffed grouse. Birds currently using these areas would likely be displaced to adjoining similar habitat.

4.2.3.4 No Action Alternative. The no action alternative would have no affect on wildlife habitat on Eielson.

4.2.4 Threatened and Endangered Species

There are no threatened or endangered species on Eielson lands and no impacts to these species would result from any of the alternatives considered in this EA.

4.3 Cumulative Impacts. The NEPA process requires that the issue of cumulative impacts be addressed. This section provides (1) a definition of cumulative effects, (2) a description of past, present, and reasonably foreseeable actions relevant to the cumulative effects analysis, and (3) an evaluation of cumulative effects potentially resulting from these interactions.

4.3.1 Definition

The Council on Environmental Quality has stated in their NEPA regulations (1508.7) that "*Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to past, present, and reasonably foreseeable future actions*...and...*can result from individually minor but collectively significant actions taking place over a period of time.*" Cumulative effects are most likely to arise when a relationship or synergism exists between a proposed action and other actions expected to occur in a similar location and/or during a similar time period. Actions overlapping with or in close proximity to the proposed action would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

4.3.2 Past and Present Actions Relevant to the Cumulative Effects Analysis

Over the years, Eielson AFB has been very cognizant of the issue of cumulative impacts to wetlands. This is due to the fact that the base, to a large extent, was built as the result of filling wetlands, and that expansion of Eielson facilities beyond the original footprint of the base often requires the use of wetlands. Of the 19,789 acres that constitutes Eielson base lands, 51 percent are designated as wetlands. To address the potential for cumulative impacts to wetlands, Eielson has developed an active program of wetland habitat creation and enhancement. Classification of Eielson wetlands according to type and quality (as defined in Cowardin, et al, US Fish and Wildlife Service, 1979) has indicated that 98.1 percent of Eielson native wetlands are of low quality. Most of these wetlands are classified as black spruce or alder/willow scrub/shrub wetlands and constitute large, homogenous blocks of land that provide relatively low wetland values to wildlife. When Eielson develops a gravel source by excavating alluvial gravel deposits, it is often in these black spruce wetlands. As part of the gravel extraction process, wetlands of a higher value are created (lake habitat with shallow littoral zones and emergent vegetation). This type and quality of wetlands are particularly valuable for feeding, nesting, and brood rearing by waterfowl, the bird species potentially most affected by the proposed project.

4.3.3 Reasonably Foreseeable Future Actions

4.3.3.1 In addition to past and present actions that could cumulatively result in significant impacts, the analysis should also consider projects that are planned in the foreseeable future. Eielson has a Base General Plan that lists projects planned for construction as far as 5 years ahead. However, statuses of these projects often change and it is hard to predict accurately more than 2 or 3 years ahead which projects will be constructed. For the purpose of this cumulative effects analysis, only projects that are planned for the next 2 years are considered.

4.3.3.2 Most of the projects scheduled for completion on Eielson during the next 2 years are associated with the build up for RED FLAG-Alaska training exercises. These projects include numerous facility renovations including office buildings, hangars, and aircraft parking ramps. All of these projects will be in the main cantonment area of the base and in conjunction with areas that have been previously impacted through development. These projects have been tiered to a programmatic EA entitled, *Omnibus Base Construction in the Developed Portion of the Base Programmatic Environmental Assessment.* Use of this programmatic EA for NEPA analysis of a proposed project requires as a prerequisite that the action(s) not result in cumulatively significant impacts. In addition to RED FLAG-Alaska projects, a new parking lot at Engineer Hill is planned for construction during the next 2 years that would impact approximately 1 acre of wetlands. Approximately 4.5 acres of black spruce wetlands would be impacted by the currently proposed work.

4.3.4 Analysis of Cumulative Impacts

The cumulative impacts analysis must look at the sum total of the past, present, and foreseeable future actions and determine whether a relationship could exist that could result in potentially significant impacts not identified when the proposed action is considered alone. To date all cumulative impact analyses that have been completed in Eielson's NEPA documents have arrived at the conclusion that cumulative impacts from base activities have not reached the threshold of significant. The current action will result in the loss of 4.5 acres of moderate to low-value black spruce scrub/shrub wetlands. During the next 2 years it is possible that an additional 1 acre of wetlands could be lost as a result of a parking lot project. However, when considering all of these activities and their impacts on the environment, Eielson's program of wetland creation/enhancement has more than offset the loss of these wetlands. Since the program was implemented in 1989, Eielson has created more than 330 acres of enhanced wetlands.

4.4 Unavoidable Adverse Impacts

4.4.1 Proposed Project. Unavoidable adverse impacts that could result from implementation of the proposed project would be the loss of 4.5 acres of moderate to low-value wetlands habitat. This would likely cause the displacement by most species currently using the wetlands to other similar habitats nearby.

4.4.2 Alternative 1. This alternative would have unavoidable adverse impacts to 0.2 acres of riverine habitat.

4.4.3 Alternative 2. Unavoidable adverse impacts that could result from this alternative would be mainly from removal 0.25 acres of birch/aspen forest.

4.4.4 No Action Alternative. No unavoidable adverse impacts would result from this alternative.

4.5 Environmental Justice

4.5.1 President Clinton issued Executive Order (EO) 12898, *Environmental Justice in Minority Populations and Low-Income Populations*, on February 11, 1994. Objectives of the EO, as it pertains to the NEPA process, requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. To accomplish these requirements, the Air Force must conduct an environmental justice analysis of all potential impacts that may result from the proposed actions.

4.5.2 The environmental justice analysis must first identify all adverse impacts associated with the project. The next phase is to delineate the potential area of impact for the resources affected. Within this area of impact, if population demographics are such that a disproportionate effect on minority or low-income populations may occur, it should be so identified. These impacts should be documented and mitigation should be developed that can be implemented by the Air Force.

4.5.3 The site for the proposed action is immediately adjacent to the flightline. The area surrounding the flightline is industrial and does not exhibit any pattern of population demographics. The actions associated with this project would have equally beneficial effects on a full cross section of the demographics of Eielson's base population. Based on the environmental impacts identified in this EA and on a corresponding environmental justice analysis, it is felt that no disproportionate impact to minority or low-income populations would occur from implementation of the proposed project. This same analysis would also be true for alternatives 1, 2, and the no action alternative.

4.6 Mitigation

No mitigation is proposed or required as a result of federal and state permits obtained for this project.

5.0 List of Persons and Agencies Consulted

Mr. Brent Koenen, USAF, 354 CES/CEVN, Eielson AFB AK, phone 377-5182.

Ms. Christy Everett, US Army Corps of Engineers, Regulatory Functions Branch, Fairbanks AK, phone 474-2166.

Mr. Larry Bright, US Fish and Wildlife Service, Fairbanks AK, phone 456-0322.

Mr. Jim Durst, Alaska Department of Natural Resources, Office of Habitat Management & Permitting, Fairbanks, AK, 459-7294.

6.0 Glossary

Alluvial - Sediment deposited by flowing water.

Cantonment - The main operational area of a military base.

Culvert - A drain crossing under a road or an embankment.

Environmental Impact Analysis Process (EIAP) - A set of guidelines (Air Force Instruction 32-7061) that the Air Force uses to comply with the NEPA process.

Decibel - A unit of measurement for describing sound intensity.

Executive Order 11990 - Mandate to federal agencies to follow the NEPA process to ensure the protection of wetlands.

Habitat - The area or environment in which an organism or ecological community normally occurs.

Installation Restoration Program (IRP) - An Air Force program mandated to identify, investigate, and clean up contamination associated with past Air Force activities.

Mean Sea Level (MSL) - The average surface level for all stages of the tide over a 19-year period, usually determined from hourly height readings from a fixed reference point.

National Environmental Policy Act (NEPA) - Legislation enacted in 1969 mandating that all federal agencies assess the environmental impacts of actions which may have an impact on man's environment.

National Historic Preservation Act - Federal mandate that requires the preservation of prehistoric and historic sites.

Non-Attainment Area - An area exceeding National Ambient Air Quality Standards for one or more criteria pollutants.

Permafrost - Permanently frozen subsoil occurring in perennially frigid areas.

Riparian - Living or located on a riverbank or a natural course of water.

SAFO 780-1 - Secretary of the Air Force Order and reference number.

Seasonally Persistent - Persistence is based on historical records and field evidence that indicates an area is seasonally inundated with water during non-frozen (spring/summer) portions of the year.

Turbidity - Cloudy or hazy appearance in a naturally clear liquid caused by a suspension of colloidal liquid droplets or fine solids.

Understory - A foliage layer occurring beneath and shaded by the main canopy of a forest.

Upland - An area of land of higher elevation often used as the opposite of a wetland.

Wetlands - Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

404 Wetland - Wetland areas that have been determined "waters of the United States" and thus subject to Section 404 wetland permitting guidelines administered by the US Army Corps of Engineers and the Environmental Protection Agency.

100-Year Floodplain - Based on historical evidence, there is a high probability that the area within the 100-year floodplain will be flooded once every 100 years.

7.0 Public Notice

USAF ANNOUNCES
an
ENVIRONMENTAL ASSESSMENT

In accordance with the National Environmental Policy Act, and Air Force regulations, Eielson Air Force Base has completed an environmental assessment (EA) and Finding Of No Significant Impact (FONSI) to evaluate the consequences of the following stated proposed action:

Fill 4.5 acres of black spruce scrub/shrub wetlands to construct an access road and vehicle inspection pad in conjunction with a new south gate for the base. The new gate will be mainly used for processing large commercial vehicles that must presently be handled through a congested north gate.

PUBLIC COMMENT WELCOME

To review the draft EA and FONSI, copies are available at the Noel Wien Library in Fairbanks. The public is invited to review these documents and make comments during the 30-day comment period from now until 10 March 2007. To get a copy of the EA, to comment, or for more information contact Jim Nolke, Eielson AFB Environmental Flight, at (907) 377-3365, or by mail at 354 CES/CEVP, 2310 Central Ave, Ste 100, Eielson AFB, AK 99702-2299.

Public Announcement was published in the Fairbanks Daily News Miner on 9 February 2007.

Staff Summary Sheet

4.191

	To	Action	Signature (Surname), Grade, Date		To	Action	Signature (Surname), Grade, Date
1	354 MSG/CCE	Coord	[illegible], 1st Lt, 20 Feb 07	6	354 FW/CV	Sign at Tab	[illegible] Col 12Jun07
2	354 MSG/CD	Coord		7			
3	354 MSG/CC	Coord	Metz, COL, 27 Feb 07	8			
4	354 FW/JA	Coord	[illegible], Maj, 5 Jun 07	9			
5	354 FW/CCE	Coord	[illegible], Capt, 7 Jun	10			

Grade and Surname of Action Officer	Symbol	Phone	Suspense Date
Jim Nolke	CEVP	377-3365	28 Feb 2007

Subject	SSS Date
Finding Of No Significant Impact (FONSI) and Finding Of No Practicable Alternative (FONPA) and Environmental Assessment (EA) for the Construction of a South Gate and Access Road	7 Feb 2007

Summary

1. Enclosed is the FONSI/FONPA/EA for constructing a new gate and access road for the south end of the base. This gate will be used to process large commercial vehicles.

2. RECOMMENDATION. 354 FW/CV sign transmittal memo to HQ PACAF/A7NA.

VR

[signature]

GARY J. SCHNEIDER, Lt Col, USAF
Commander

2 Tabs
1. Transmittal Memo to HQ PACAF/CEV
2. FONSI/FONPA/EA